

Listing of Claims

1. (Currently amended) A transgenic plant comprising a plant transformation vector comprising a heterologous nucleotide sequence that (i) encodes a DRO5 polypeptide comprising an amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO: 2, or (ii) is fully complementary to a sequence that encodes a DRO5 polypeptide comprising an amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO: 2, ~~or an ortholog thereof~~, wherein said transgenic plant has increased drought tolerance relative to control plants.

2. (Currently amended) The transgenic plant of claim 1 wherein the transformation vector comprises a constitutive promoter that controls expression of the DRO5 polypeptide ~~or ortholog~~.

3. (Currently amended) A plant part obtained from the plant ~~according to~~ claim 1, and comprising said plant transformation vector.

4. (Currently amended) ~~The plant part of claim 3, which is a~~ A seed obtained from the plant of claim 1, and comprising said plant transformation vector.

5. (Withdrawn and currently amended) A method of producing increased drought tolerance in a plant, said method comprising:

(a) introducing into progenitor cells of the plant a plant transformation vector comprising a heterologous nucleotide sequence that (i) encodes a DRO5 polypeptide comprising an amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO: 2 or (ii) is fully complementary to a sequence that encodes a DRO5 polypeptide comprising an amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO: 2, thereby producing transformed progenitor cells ~~or an ortholog thereof~~, and

(b) growing the transformed progenitor cells to produce cells to produce a transgenic plant, wherein said polynucleotide sequence is expressed, and said transgenic plant exhibits increased drought tolerance.

6. (Currently amended) A plant obtained by a method of producing increased drought tolerance in a plant, said method comprising:

(a) introducing into progenitor cells of the plant a plant transformation vector comprising a heterologous nucleotide sequence that (i) encodes a DRO5 polypeptide comprising an amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO: 2 or (ii) is fully complementary to a sequence that encodes a DRO5 polypeptide comprising an amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO: 2, thereby producing transformed progenitor cells, and

(b) growing the transformed progenitor cells to produce cells to produce a transgenic plant, wherein said polynucleotide sequence is expressed, and said transgenic plant exhibits increased drought tolerance~~claim 5.~~

7. (Withdrawn) A method of generating a plant having an increased drought tolerance phenotype comprising identifying a plant that has an allele in its DRO5 gene that results in increased drought tolerance compared to plants lacking the allele and generating progeny of said identified plant, wherein the generated progeny inherit the allele and have the increased drought tolerance phenotype.

8. (Withdrawn) The method of claim 7 that employs candidate gene/QTL, methodology.

9. (Withdrawn) The method of claim 7 that employs TILLING methodology.

10. (New) A plant cell obtained from the plant of claim 1, and comprising said plant transformation vector.